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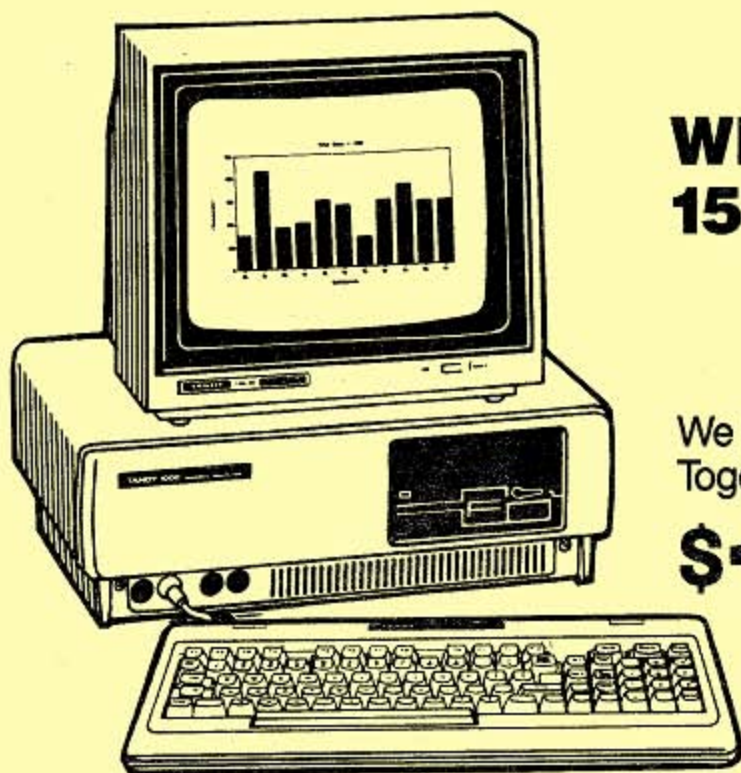
ENERGY = MC^2 ...THE MICHIGAN COMPUTER CONSORTIUM MAGAZINE

ISSN: 0740-2759

JUNE 1985



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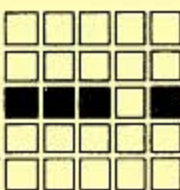
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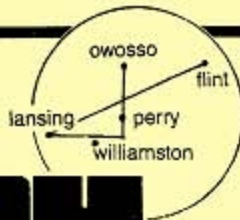
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MAY 1985

SU	MO	TU	WE	TH	FR	SA
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

CONSORTIUM CALENDAR

JUNE 1985

JULY 1985

SU	MO	TU	WE	TH	FR	SA
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
						CCUG
2	3	4	5	6	7	8
			M36 EXEC	CHARC		DRUG
9	10	11	12	13	14	15
	TI USERS GROUP	HEATH SIG	LACC	Flag Day	CHAOS	APPLE LUG ENERGY DEADLINE
16	17	18	19	20	21	22
Father's Day	EPSON USERS	CHTUG	M36			
23	24	25	26	27	28	29
	UPCO (IBM PC)		CP/M SIG		OSBORNE SIG	
30						

LANSING AREA COMPUTER CLUBS

Apple LUG (Lansing Users Group)

Meets: Third Saturday, 9:30 A.M.
102 South Kedzie Hall, MSU, East Lansing
Contact: P.O. Box 27144, Lansing, MI 48902

CCUG (Greater Lansing Color Computer Users Group) (MC2)

Meets: First Saturday, 1:00 P.M.
East Lansing Public Library, 950 Abbott, E.L.
Contact: P.O. Box 14114, Lansing, MI 48901
Terry Feichtenbinder 371-1594

CHAOS (Capitol Hill Atari Owners Society) (MC2)

Meets: Third Saturday 10:00 AM
Lansing Public Library Auditorium
401 S. Capitol, Lansing
Contact: PO Box 16132, Lansing, MI 48901
Leo Sell (president) 393-7792

CHARC (Central Michigan Amateur Radio Club)

Meets: 1st Friday, 8:00 pm
American Red Cross Bldg.
1800 E. Grand River, Lansing
Contact: Ken Noble W8JYB 372-0994

Comp Klub of Lansing (TI Users Group)

Meets: 2nd Tuesday, 7:00 pm
River Front Community Bldg.
501 N. Cedar St., Lansing
Contact: John Hayes 882-7860; Eugene Loyd 394-1494

DRUG (DEC Rainbow Users Group)

Meets: 2nd Saturday, 11:00 am
Institute for Family & Child Study
Home Management House #2, MSU (next to BerKey)
Contact: Jeffrey Weihs 353-3717 (days) 349-6967 (evenings)

Epson Users Group

Meets: Third Monday, 7:00 pm
Library of Michigan, 735 E. Michigan, Lansing
Contact: Ted Bozarth 332-3710 (after 8 PM)

LACC (Lansing Area Commodore Club)

Meets: Second Thursday, 7:00 PM
All Saints Episcopal Church, 800 Abbott, E.L.
Contact: PO Box 1065, East Lansing, MI 48823
Jae Walker (president) 351-7061

M36 (Mid-Michigan Microcomputer Group) (MC2)

Meets: Third Thursday (usually), 7:30 PM
East Lansing Public Library, 950 Abbott, E.L.
Contact: PO Box 1302, East Lansing, MI 48823
Warren Wolfe (president) 337-7672

Executive Meetings:

First Thursday, 7:30 PM
Beggars Banquet, 218 Abbott, East Lansing

M36 CHTUG (Central Rich. TRS-80 Users Group) SIG (MC2)

Meets: Third Tuesday, 7:30 PM
Foster Community Center, 200 N. Foster, Lansing
Contact: Lee Hodges 669-3258

M36 CP/M SIG (MC2)

Meets: Last Thursday, 7:30 PM
Foster Community Center, 200 N. Foster, Lansing
Contact: Greg Martin 484-5850

M36 Heath/Zenith SIG (MC2)

Meets: 2nd Wednesday, 7:30 pm
All Saints Episcopal Church, 800 Abbott, E.L.
Contact: Tom Trana, PO Box 829, East Lansing MI 48823

M36 Osborne SIG (MC2)

Meets: Last Saturday, 1:00 pm
(In a member's home; call for directions.)
Contact: Larry Tirone 484-3921

MSU MUG (MSU & Capitol Area Macintosh Users Group)

Meets: During MSU school year - not again until Fall
Contact: John Sykes 332-6720

U.P.C.O. (Users' Personal Computer Organization--IBM PC group)

Meets: 4th Tuesday, 7:30 PM
Rm. 118, Agricultural Engineering Bldg., MSU
Contact: Skip Osterhus 321-3425

Clubs designated (MC2) are members of the Michigan Computer Consortium.

This listing is as accurate as the information we receive. To list an event or update information, contact Joe Werner at 337-7415 (evenings), or on the local BBSs BabbleNet or LSJ Access, or via MCI Mail (JWERNER).

ABOUT ENERGY

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Subscriptions to ENERGY are provided as a benefit of membership in one of the clubs constituting the Consortium. Subscriptions are not otherwise sold. For information about joining one of the clubs in the Consortium, write the club at the address above.

ABOUT THE MICHIGAN COMPUTER CONSORTIUM

The Michigan Computer Consortium (MC2) was formed in 1983 to sponsor joint activities involving member computer clubs. Current members of MC2 are:

CCUG Greater Lansing Color Computer Users Group
CHAOS Capitol Hill Atari Owners Society
M3G Mid-Michigan Microcomputer Group
UPCO Users' Personal Computer Owners

Information about each of these clubs is published elsewhere in ENERGY.

EDITORIAL BOARD

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Joe Werner	(M3G)	337-7415
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ADVERTISING

Advertising in ENERGY is an economical way to promote your products or services to a key audience involved in personal computing. Four sizes of ads are available: business card, quarter-page, half-page, and full-page. Advertising space is limited and controlled, so that ads will never get "lost". Camera-ready copy is needed by the 15th of the month preceding publication. Limited graphics artwork is available at an extra charge. For more information, contact the Editor.

ARTICLE SUBMISSIONS

Persons wishing to submit articles are encouraged to do so. Articles may be submitted in camera-ready form (3.5 inch columns, 16 characters per inch, 8 lines per inch), or on disk. Contact any Editorial Board member. The deadline for articles is the 15th of the month preceding publication.



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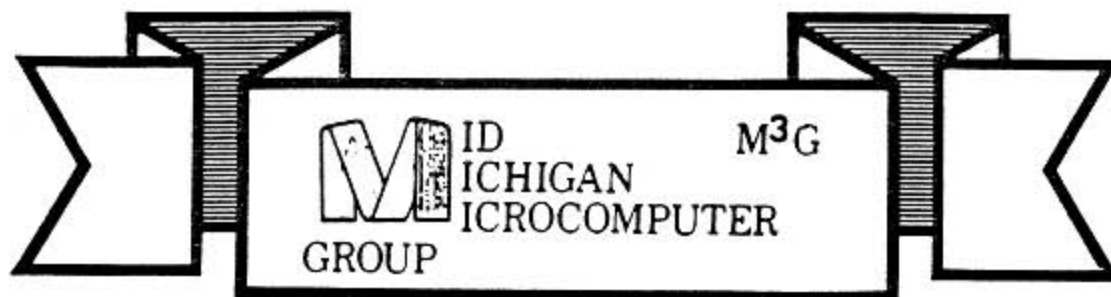


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If a store doesn't advertise here, then let them know you would like to see their ad in ENERGY. Many dealers need to understand how many bonafide users read ENERGY regularly.

M3G



ABOUT M3G

Mid-Michigan Microcomputer Group (M3G) is a non-profit organization of computer hobbyists, enthusiasts, and users in the Lansing and Mid-Michigan area. Formed in 1975, M3G is the oldest personal computer organization in the area, and one of the pioneer organizations in the country. Membership in the club is open to anyone with an interest in personal computing.

MEETINGS

General Membership meetings are held each month, generally on the third Thursday of each month (barring scheduling problems), at 7:30 pm, at the East Lansing Public Library, 800 Abbott Road, East Lansing. Executive Committee meetings are held on the first Thursday of each month at 7:30 pm, at Beggars Banquet restaurant in East Lansing.

DUES

Annual dues for M3G are \$12.00, for 12 consecutive months. Family memberships (two or more people at the same address, receiving only one copy of the Newsletter) are available. The Master member pays full dues; additional family members joining at the same time each pay \$1.00 per year.

To join M3G, come to any meeting, or send one year's dues with your name and address to: M3G, c/o P.O. Box 1302, East Lansing, Michigan 48823.

AFFILIATIONS

M3G is a member of the Midwest Affiliation of Computer Clubs (MACC), and of the Michigan Computer Consortium (MC2).

NEWSLETTER

M3G members receive ENERGY, published by the Michigan Computer Consortium, as a benefit of membership.

SPECIAL INTEREST GROUPS

M3G currently has four active Special Interest Groups: the Central Michigan TRS-80 Users Group (CMTUG) SIG, the CP/M SIG, the Heath/Zenith SIG, and the Osborne SIG. These SIGs hold additional meetings as their members desire, and may charge SIG dues in addition to M3G dues if the SIG so decides. SIG meetings are announced in the Meeting Calendar in ENERGY. Additional SIGs may be formed on any computer-related topic which M3G members may want.

EXECUTIVE COMMITTEE

President.....Warren Wolfe.....337-7672
Vice President.....(Vacant)
Secretary.....Dean Shipman.....355-6181
Treasurer.....Joe Werner.....337-7415

MACC Trustee.....Frank Dolinar.....351-1779
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CMTUG SIG Chairman.....Lee Hodges.....669-3258
CP/M SIG Chairman.....Greg Martin.....484-5850
Heath/Zenith SIG Chmn...Tom Trana
Osborne SIG Chairman....Larry Tirone.....484-3921

To join M3G, please fill out the following, enclose with your dues, and mail to M3G, c/o P.O. Box 1302, East Lansing, MI 48823, or come to a meeting.

NAME: _____

ADDRESS: _____

CITY, STATE: _____ ZIP: _____

PHONE: _____ (home) _____ (office)

Dues:	() M3G	\$12.00
	() CMTUG SIG	(no additional dues)
	() CP/M SIG	(no additional dues)
	() Heath/Zenith SIG	(no additional dues)
	() Osborne SIG	\$ 2.00

TOTAL:

THE USER
by Joe Werner

The Right Computer, Part 2

Last month in this space, I discussed some ideas about choosing the right computer. I suggested two questions: (1) "What do I want a computer for?" and (2) "Will this machine do what I want it to do?" Once these two questions are answered honestly, the questions "Is this computer worth the price?", and "Is this the right computer for me?" might be answerable.

This month, I want to discuss briefly the subject of software. In any computer purchase, the software is becoming more and more prominent. In some typical business computer acquisitions, it is not unreasonable to expect to pay equal amounts for software and hardware. Indeed, there are cases where computers have been purchased expressly to run a single software package. (I think back to VisiCalc, which sold a large number of Apples. Today, Lotus 1-2-3 has done some of the same thing for IBM and compatibles.)

The choice of software is every bit as important as the choice of hardware. Indeed, once you have answered the first question above, and have an idea about what you want a computer for, it may be better to go shopping for software first, and then choose a machine to run it on. Consider for example that you have bought an Apple II, and then decide that the only software that meets your needs is 1-2-3, which runs only on an IBM or compatible. Or you may buy an IBM, and then wish you could run a statistical plotting package that only runs on the Apple IIc. In both hypotheses, you have fine machines that aren't right for your needs, since they won't run the software you want.

So how do you pick out software? The best answer is "Take it for an extended test-drive." Sometimes you can find a dealer who will help you set up the software and try it out on your own real world application. If you can, by all means take advantage of it. And if you find the right software, buy it from the dealer who has bent over backwards to help you evaluate it. Such a dealer has earned profit on the sale, and will probably help you more after the sale.

In some cases, you can even try the software on your own system, with the right to return the software within a reasonable amount of time if it won't do the job. Such arrangements are the exception, however. If you'd like such an arrangement, make sure all understandings are up-front and in writing. Most software is sold today with express disclaimers of all kinds, and with a "non-returnable" policy. The dealers and software authors are, of course, afraid that you'll copy the disks and manuals, return the software, and have a 'pirated' copy. But I recall

that Ashton-Tate originally sold dBase II with a return policy, and I believe that that policy helped make dBase II the best-seller that it became.

Another good way to find out about a software package is to talk to others who are using a package to do a job similar to yours. Talk to people in your line of work, using the packages you are interested in, and see what good and bad points they have discovered. Your best source of information such as this is probably trade associations, fraternal and civic organizations, and computer user groups. Ask around.

If yours is a special need, you may do well to hire the services of a consultant to help you. A consultant can talk with you, help you evaluate your needs, and recommend software to solve your problems. Consultants base their recommendations on the same information networks discussed above, as well as on the basis of their own experience. Often, the money spent for a consultant is money well invested.

You can base your buying decision on magazine articles and reviews. But if you do so, read several reviews if possible, and try to sort out various reviewers' biases. (All reviewers have them.)

The worst way to choose software is usually to buy on the basis of flashy advertisements and fancy claims. There is an awful lot of "Vaporware" on the market today. ("Vaporware" is much softer than software -- in fact, it doesn't exist at all!) You may very well be buying software that hasn't been written yet, and which may never quite do what you want.

ABOUT THE AUTHOR

Joe Werner is an independent consultant and contract programmer/analyst, and a member of M3G. He can be reached at P.O. Box 926, East Lansing, MI 48823, or via MCI Mail, or on local Bulletin Boards LSJ Access or BabbleNet, or at (517) 337-7415.

H/Z SIG NEWS

by Thomas Trana

The May meeting was earlier in the month than usual since the first of the month was on a Wed., and apparently some members didn't realize it, though we did have about 10 people present, including a couple of new faces. One of the first items of business discussed was starting a database of what equipment and software members have and/or are familiar with, and which they might be willing to serve as resources for. Most members seemed to think it was a good idea, though apparently a couple didn't, since they did not fill out the form! We should probably discuss this more at a future meeting, especially how the information gathered is to be distributed.

Bill Goodwin wins the rush to be the first member of the SIG to put in the RAMPal chips and get 700K of RAM on his motherboard, though he did it the hard way by modifying his older-version board. Steve Mann showed a sale flyer he had just gotten from Heath, showing, among other things, a new version of the H-100 which runs at 8 MHz, and comes with one bank of 256K RAM chips installed, and easily upgradable to three banks of same--and the prices of the machines were lower than the old H-100 prices, to boot!

Last month we discussed what benefits/services the SIG offers members and that started me thinking about what other services it might be possible to add to the already existing ones. One possibility is quantity discounts. Recently I have found three vendors who give quantity discounts on purchases of more than one copy of an item at a time. New Orleans General Data Services offers a 30% discount on orders of 5 or more copies of Z-Graph-100, a package of graphics routines for the H/Z-100. They are written in assembly language and are callable from several languages. Normally selling for \$89.95 + shipping, with such a discount the package would come to about \$64. The author of Z-Graph-100 has put together an impressive demo routine which is public domain, to show off the package and also the graphics capabilities of the '100 series. I will run the demo at the next meeting for those who haven't yet seen it.

Another package I am looking at is a "personal typesetter" program called *Fancy Font* from Softcraft, Inc. This package works with dot matrix printers and allows mixing of several different sizes and styles of print in one document. It gives much higher quality of output than you can normally obtain from such printers, though it is not quite as good as a daisy wheel. However, it is more flexible, and cheaper than another printer for those who already have a dot matrix. The company gives a discount for 2-4 copies, and a larger discount for 5 or more. I finally recieved their demo disk, and the general MS-DOS

version does run on a '100. I will have a printer at the next meeting and show this demo as well. The demo is public domain, so anyone who wants a copy of it should bring a disk. I also noticed that First Capitol Computer offers quantity discounts on 3+ items and 10+ copies. In addition, they say they offer group rates to organizations, including some computer clubs. I have written to them to see about our group getting official status and to get details such as how large the discount is and the conditions under which it applies. Hopefully, I will have heard from them by the next meeting. So, anyone thinking of ordering the RAMPal chips in the near future, if you want to save a few dollars, consider waiting a while yet. I am very interested in the conversion if my motherboard turns out to be one of the newer versions. In a group as relatively small as ours, it might be difficult to get 5 or more users who are interested in a particular program at the same time, but I think it is worth trying.

Recently I recieved a sale flyer from Payload Computer Services in Houston, TX, advertising a "million dollar software sale." Unfortunately, I already have most of the things they had that I was at all interested in, but one exception was the Condor Relational Data Base (\$650 list) for \$145 + S&H. I had been leaning towards dBase II, but that would have been twice as much with the best price I could get that for, so I decided to try Condor. Just recieved it, so I am not fully up on its capabilities and limitations, but I think it will do most, if not all, of my data base needs. Some other things they had were CPM-B6 for \$60, Peachtext 5000 for \$77, Microstat (a decent stat pack written in basic, \$250 list) for \$60, et al. Don't know how large their stocks of items are, but if you would like to write for their flyer (they had a few things for Z-150's and H-89/90's as well), their address is: 15006 Sun Harbor, Houston, TX 77062. I ordered by phone and their service was reasonably fast, though not the fastest I've seen.

The theme of the next meeting (June 12) will be "Graphics on the '100." I will arrange for a color monitor to be there, so we can show off some of the classic graphic demonstrations for the '100, like LACE and Z-Graph-100, and also some recent ones, like the Intuitive Logic "Graphics and Games" disk (which has had about 6 of its pictures printed in color in Remark and Sextant over the past 6 months). The *Fancy Font* demo will apply equally to '100 and '150 users. If anyone has some graphics demos for their '150/160, bring your machine and show them off.



MORROW MEMOS

Learning to Talk By Cheryl Tirone

If you are one of the many trying to get on to the very, and underline 'very', popular bulletin boards around Lansing, you know how difficult it is. It is essential to have an autodial communications program or you're just wasting your time.

Well for the Morrow I have Modem7 installed and a routine that was written in Turbo Pascal to complement it. With this pair I can autodial and still be able to download and do all that other nifty stuff.

Now I'm not the type to complain but I must edit my phone numbers with wordstar and I have to dial then invoke Modem7 and by the time I get that all done I've missed the signon.

Enter MEX.

MEX appears to be a real neat communications package that has rolled the best of Modem and MDM with the features of ZCFR all into to one handy program. At this point I'm not very far with it as some rather hefty assembly language programming is needed. What I have done is to first install MDM onto my Morrow. The next step will be to use the MDM overlays and source to write an overlay for MEX.

For anyone who is interested I have the skeleton of MEX in library format plus some very nice documentation. As soon as I have some free time I plan to upload it to LSC Access area. In the meantime don't give up dialing.

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Quiet Junior: I'm trying to think!

by
Duane B. Fischer

I still recall those wondrous, excited moments as I unpacked my first computer on October 18, 1980. My hands trembled as I explored the keyboard of the Texas Instruments 99/4. I held my breath as I plugged the speech synthesizer into the peripheral bus. The speech was burned into ROM chips and had a limitation of 367 words, phrases, and numbers. Limitations or not, it could speak, and that fascinated me. Part of this magical enchantment with a talking computer had its roots in the fact that I had been totally blind for sixteen of my then thirty-four years.

I faithfully devoted four years of my life to exploring the mysteries of that computer, and managed to accomplish some impressive deeds. I found a way to cause the computer to speak a line listing on command, wrote a routine to read error messages off the screen, and taught myself to program using sound and speech as a substitute for vision. When Texas Instruments withdrew from the market, the only affordable talking computer went with them. I was devastated. What was I going to do with all the work I had so tediously contrived for my fellow blind computer owners?

Then I became curious about a new computer that IBM had announced, and decided to try a PCjr for myself. I wandered into a local dealer and experimented. I didn't like it, I LOVED it! Hope was reborn, and I was off on a new crusade to slay all the critical dragons by clubbing them with the BASIC manual.

I purchased an Echo C speech synthesizer from Street Electronics, pulled up my well worn programming chair, and set about discovering what a blind man could do with the horsepower of the PCjr. I was able to move quite swiftly, thanks to my very close friend, Gary Teachout, who bought a PCjr at the same time I did and devoted countless hours of his own time reading the instructional manuals to me. To date, I have not found any limitations for a blind person. This was not the case with my former computer. The TI had been a fine entry level computer, but it was time for me to move up to a more powerful system.

It is possible to have a single line, or multiple lines, of a program spoken by redirecting the output of LPT1 to the serial port COM1. However, this changes to COM2 if the direct connect internal modem is installed. When the Function Echo is activated, the output is directed to the screen and to the printer simultaneously. However, in this particular case, the output does not go to the printer. It goes to the serial port indicated and then to the Echo PC. Thus, when you type: LIST 10-100 and press enter, those lines are displayed on your screen and also spoken by the synthesizer. Below is the code that causes this to happen. You must be in the "system" mode with DOS 2.10 installed in drive A. Type the following:

```
MODE LPT1:=COM1: and press enter.
```

```
Next type
```

```
MODE COM1:4800,N,8,1 and press enter.
```

You can cause punctuation marks to be spoken by keying in the following line at the start of any program:

```
OPEN "COM1:4800,N,8,1" AS #2:
PRINT#2, CHR$(15):
PRINT#2, "&N"
```

If you now list a line of a program, all punctuation marks are pronounced as words; for instance, "!" is "exclamation mark" and "," is "comma." This is a CRITICAL requirement for anyone who as visions of programming and happens to be blind. The Echo PC will retain this directive as long as it is not turned off. Therefore, typing "new" on your keyboard will not affect the operation of the Echo PC.

The unfortunate part of this is that the use of the printer is lost when the parallel port is redirected to the serial port. You have, in effect, tied both ports together to form one. Personally, I consider this inconvenience a small price to pay for the power of speech. If speech is encoded into a program, both ports are free to operate the synthesizer and the printer. You can run a program while the ports are redirected, but if a printer command is encountered it is directed to the synthesizer. This does allow you to hear what would normally be printed, but too much data flow will result in a buffer overload in the Echo PC. This overload will terminate the running program and issue a "device timeout" error message.

One problem I encountered was that the PCjr defaults to the "edit" mode when it encounters a blunder -- very convenient if you are sighted, but a royal pain if you are not! Heaven only knows how many times I have accidentally keyed over a line because of this "work saving" feature. I am using an external amplifier to handle sound output, and if I listen closely I can hear a soft "pop" when the PCjr sneaks into the "edit zone." This isn't a very reliable method, though, so I devised a routine to trap errors and keep me out of harm's way.

The program is a subroutine which is stored on your favorite experiment disk in "merge" format. It can be plugged into any program at any desired moment in time. It is numbered from line thirty thousand upwards, so it should not conflict with your program lines. It activates an error trap that allows you to abort the edit mode. When an error is encountered, the program reads the ERR code and sends you to the appropriate line containing the printed error message. This message is spoken by the synthesizer, along with the offensive line number. You are cautioned by a 110 Hz audio tone and then warned verbally to press enter to abort edit. The contents of the erroneous line are also read aloud to you. This routine occupies about 2.765KB of memory and uses only the most common error messages, thirty six in all.

There are a variety of nifty things you can do with the "function echo" and the "function print screen" commands. For example, Function "E" can allow you to have variable values spoken, strings read back, and lines of code spoken after you enter them. It may also be used with CompuServe to cause each text line that scrolls up to be spoken. This permits a blind user to chat on the CB Simulator, read electronic mail for himself, browse through the SIGs, or spend money in the department stores of the Electronic Mall. Sometimes the screen will be several minutes ahead of the speech, but this is not a serious problem. You can clear the buffer of the Echo PC by simply switching it off and then back on.

The function "F" command is useful for reading the contents of a screen. It can be used in a program without encoded speech to read the text, or used to read an error message that has occurred. It can also be used to reread data if a second reading is needed. The Echo PC buffer can easily hold the contents of an entire screen.

I have written a myriad of programs with encoded speech, permitting full speech output. They range from a phone/address data base to a mailing list to a receipt data base to a video tape directory. My most recent effort is the "SPEAK-A-LETTER" text editor. It is my version of what a text editor should be, and departs from some traditional norms. It allows individual character speech, punctuation marks spoken, full editing with replace, insert, delete, and move routines, automatic cursor location, screen wrap around entry, spelling of lines with blank spaces and uppercase characters identified, immediate line review, and much more. I designed this program with the end home user in mind, and not the simplicity of use. I don't put any credence in ten-page quick reference cards!

I wish to commend IBM for their insight and technological prowess in the design of the PCjr. It is the

"Ideal" system for someone who is blind, and it is priced in a range that is cost effective and affordable. I hope that IBM does not overlook the potential for this machine among the handicapped!

For over four years, our user group has specialized in the sight handicapped. If you know of someone who is blind, tell them the virtues of the PCjr and give them our name:

Users of America
5028 Merit Drive
Flint, MI 48506

I don't think that you will shout at this jr to be quiet, but you may squelch your own jr so that you can hear this jr speak.

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CAPITOL HILL ATARI OWNERS' SOCIETY

C.H.A.O.S. IS:

C.H.A.O.S. is the Capitol Hill Atari Owners Society. CHAOS meets every third Saturday in the Foster Community Center (200 N. Foster). The meetings run from 9am-12 noon. The presentations at meetings include new hardware and software and news. Business is limited at general meetings to make the meetings more enjoyable.

C.H.A.O.S. MEETINGS ARE:

FUN, EXCITING, INFORMATIVE, AND CHAOTIC

You will have to see a CHAOS meeting to believe it. The discussions are lively, with lots of news and information. The presentations are of general interest. The speakers arrange their presentations to be understood by the beginners in the group as well as the experts.

The presentations at any meeting may include wordprocessors, games, databases, educational applications, utilities, hardware, and hardware modifications and enhancements.

There are experts and beginners in CHAOS and there are Special Interest Groups periodically when interests arise.

C.H.A.O.S. IS YOUR BEST COMPUTER PERIPHERAL

In addition to receiving a monthly newsletter that will keep you informed of local, national, and international events in computers, you will have access to the largest Atari public domain library of programs in the world.

C.H.A.O.S. HAS OVER 600 PROGRAMS IN ITS LIBRARY.

The CHAOS library is growing every day. This can save you a great deal of time and money. Programs that you write can be added to the CHAOS library. If you would like a listing of the programs in our current library, please send a large self-addressed, stamped envelope. Include an extra 50 cents if you are not a CHAOS member to cover printing costs. Mail your request to CHAOS, PO Box 16132, Lansing, Mich 48901.

C.H.A.O.S. RUNS A BULLETIN BOARD SYSTEM

CHAOS runs a Bulletin Board System that you can dial into if you own a modem. The telephone number for the BBS is 517-627-4243. CHAOS's BBS is one of the most sophisticated systems in existence. It provides a means of leaving messages for other computer owners and a means of obtaining FREE software. Join CHAOS now and get your password right away.

CHAOS's Officers and Leaders

Position	Name	Phone#
President:	Leo Sell	393-7792
Vice president:	Lance Ward	393-1357
Treasurer:	Rob Peck	887-0327
Newsletter Editor:	Mike Aldrich	394-2412
Program Librarian:	Guy Hurt	484-7675
Pub. Librarian:	Richard Evans	351-2381
Rec. Secretary:	Sandy Theisen	882-0124
Cor. Secretary:	Dick Peterson	485-7727
Program Coord:	Gary Ferris	393-2593
Membership Coord:	Bill Mundt	288-6590
BBS Sysop:	Barry Schroeder	627-6708
BBS Sysop:	Mike Clewley	627-7807
BBS Librarian	John Nagy	487-5646

C.H.A.O.S. NEWSLETTER EXCHANGE

If your Atari users group would like to exchange newsletters with CHAOS PLEASE send your newsletter to the following address:

C.H.A.O.S.

ATTENTION: NEWSLETTER EXCHANGE

P.O. BOX 16132

LANSING, MICHIGAN 48901

Please update you current list of CHAOS addresses, officers, and BBS number with the previous information.

C.H.A.O.S. PUBLICATIONS LIBRARY

CHAOS has many books and other publications about the Atari computers that can be checked out by members. Each month CHAOS receives newsletters from other Atari clubs from around the world.

HOW TO JOIN C.H.A.O.S.

If you would like to join CHAOS then fill out a membership form or send your Name, address and any other information about yourself you would like and \$12.00 (Yearly membership fee) to:

CHAOS

ATTN: MEMBERSHIP

P.O. BOX 16132

LANSING, MICHIGAN 48901

CHAOS

PRESIDENT'S CORNER

by Leo Sell

Those of you who missed the May meeting missed a good demo of the new 130XE and DOS 2.5. The combination of the two is just phenomenal. With the RamDisk in operation access to DOS, along with Saving and Loading, is instantaneous. Tempting!!

We need demo's for the upcoming meetings. If you don't care to do it yourself, contact Rob Peck or Dick Peterson or myself to do the demo for you. Our program coordinator is now Gary Ferris.

With this in mind, let me give some tips for making public demonstrations:

1. Check your fly and buttons. Embarrassment can slow you down.

2. Make an outline. Know what you want to accomplish, where you want to start and where you want to finish. You may or may not use notes in your demonstration but it is important to outline your presentation sometime before and map out your demo. Without doing so it is easy to get bogged down in details. Give only essential and intriguing information.

3. Keep your head up and project your voice. I find it helpful (bass voice notwithstanding) to pretend I am trying to talk to a particular person at the back of the room. Pick a person out and project your voice to them. If you keep extraneous details out of your presentation, the above tips should help you make a better demonstration. Hope to see some new faces making demo's at future meetings.

The idea of having a CHAOS family picnic for our August meeting was well received. Stay tuned for further details. If we can't find a park and pavilion, I may host it at my home. Lots of room near me at Hill High School and Davis park. Til next time, happy computing.

WANNA PRINT YOUR VARIABLE NAME LIST

```
32000 REM FROM SF BAY USER GROUP
32100 REM PROGRAM TO PRINT THE VARIABLE NAME LIST
32110 DIM ARRAYNAME(1),STRINGNAME$(1)
32120 REM GET THE BEGINNING OF THE LIST
32130 ADDRESS=PEEK(130)+PEEK(131)*256
32140 ? ")*";"VARIABLE NAME LIST"
32150 REM GET CHARACTER AND TEST FOR END
32160 A=PEEK(ADDRESS):IF A=0 THEN END
32170 REM PRINT CHARACTER
32180 IF A<128 THEN ? CHR$(A);:GOTO 32210
32190 ? CHR$(A-128)
32200 REM GET NEXT ADDRESS & REPEAT
32210 ADDRESS=ADDRESS+1:GOTO 32160
```

Enter this program at the end of yours and type *60T0 32000" and watch out!

FROM THE EDITOR

You'll notice alot of reprints this month. Thats because no one submitted anything! Come on! There are over 130 members out there that I know can write. This is your newsletter, CONTRIBUTE.

Had I not gotten a disk of reprints from ACUSOFT, this newsletter would have been mighty thin! By the way you'll should notice that the first paragraph was written in Near Letter Quality mode on my SG10, and this was in regular draft mode. Pretty nice for a \$249 printer huh!!

Anyway:

If I don't start getting articles from you guys (and girls), I'm not going to care if you get a decent newletter! I know who you are. Please help me. I am only one person. Nuff said.

W E N E E D A R T I C L E S

NEWSLETTER SUBMISSIONS

Newsletter submissions are actively solicited. Got something to sell, do you know some hints or kinks, or do you have questions, or have you written a demo, game, or utility. Nothing is too big or too small. Submit it to the newsletter. See your work in print! Submissions can be mailed to CHAOS, ATTN: NEWSLETTER ARTICLE, P.O. BOX 16132, LANSING, MICHIGAN, 48901. Please send all submissions on disk(I don't like to type either). Documentation can be any type of file, just tell me which. Your disk will be returned to you. Your cooperation is greatly appreciated!

Your Friendly Newsletter Editor
Mike Aldrich

CHAOS

Call Me Modem

(Reprint from Computer Squad News Jan85)

by Suzi Subeck

Microbits, makers of the famous MPP 1000C modem, have started a special technical support group to aid Atari users and user groups with whatever computer problems they may have. To make themselves easier to reach, they have started the MPP support BBS as 503-9261980. In addition to their other regular features, MPP will include a list of user's groups and their locations and phone numbers to accommodate those who may not be aware of groups in their area. They will also be including a small insert in their products in the future to spread the awareness of users' groups around the country.

Microbits is expected to present their new 1200 baud modem at the CES in Vegas. In addition they will be showing their new hard drive and expansion chassis.

Because there are so many new modem users (what with the Christmas holidays and all) it is probably worth repeating some of the "basic" information about telecomputing that has passed through these pages.

First, home telecommunication is becoming a more and more wide spread hobby. Modems are more affordable than ever before and free public domain bulletin board systems provide excellent ways for users to exchange information as well as to share a wide volume of public domain software.

Direct connect modems have become very popular within the last year. Modems such as the Atari 1030, 835 and the Microbits 1000C connect directly to the computer without the use of an RS232 board, such as the Atari 850 interface. This eliminates a great deal of hardware expense. This can be done using software emulation of UART chip to control data impulses between your computer and your modem.

A modem, or modulator - demodulator (from which the word is derived) is a mechanism which translates electrical impulses to sound. These sounds are transmitted over normal telephone lines, between your computer and a host computer (the machine on which the BBS is run).

In addition to the proper hardware, the proper software is also necessary. If you intend to up- and download (transfer files to and from the host computer), there is an AMODEM program in the public domain to suit your needs. Both 835 and 1030 owners must use one of two programs, either AMOD835 or DISK-O-LINK depending on the program of the host, in order to have up and downloading capabilities. (these programs are available through the ACUSOFT public domain library). Owners of non - direct connect modem may use any of the other popular AMODEM series. MPP owners must have the R: handler (commonly referred to as the 'driver disk') in order to be able to use the AMODEM software. MPP owners do have limited up and downloading capabilities simply by using the SMART TERMINAL cartridge supplied by MPP.

This newsletter is a good source of free public access bulletin board system phone numbers. If you are looking for a larger list (including Apple, TRS80, or Commodore boards), this may be found by calling one of the large CP/M systems, such as C.A.M.S. at 927-1020.

Be sure to be in ASCII translation when you call

non-ATARI boards. Should you be in ATASCII, use your software controls to switch (generally SELECT followed by the 'A' option). On ATARI systems, ATASCII is recommended because certain inverse graphics may be present and can only be seen in ATARI mode.

On most bulletin boards systems, you may enter a "?" to get a list of commands. Once in a while, if that does not work, you may try a <CR> (or carriage return).

Most BBS command lists are similar to one another. Either the 'R' or 'M' option loads the message base. Either 'C' or 'Y' stands for 'chat' or 'yell' for the sysop. (SYSOP stands for system operator. This is a feature generally put there to let you talk to the operator of the system if you have problems. Some system operators lead a lonely life and they have nothing better to do than stand by the computer waiting for you to 'chat' with them, rudely wasting your dime) 'F' will generally get you a list of the available programs, or files for downloading. Some boards use the 'I' command for a description of these programs. Either 'B' or 'O' will usually result in a list of other Atari boards in the same area as the host. 'G' is most often a 'sign-off', standing for good bye.

Bulletin board systems which ask for a password generally allow you to choose one if you don't already have one. Don't be intimidated by this. Unfortunately some callers leave obnoxious, or X-rated messages, and passwords have become a sysop's means of protecting his system from these callers.

I hope this is adequate to get you started with your 'Christmas' modem. If you have any specific questions, or if you need help, you can write to me, Suzi Subeck, 2625 Corinth Road, Olympia Fields, IL, 60461, or call on the VALLEY GIRL BBS (312-747-4247). In addition to this, greater information is available in the June and July, 1984 issues of ANTIC.

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```
*****  
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$       ON COMPUERVE.       $  
*****
```

A little more history is being made here as ANTIC ONLINE responds to the first batch of CompuServe subscriber I/O questions.

SYNCCALC TAX TEMPLATE

We've taken a number of phone calls about this, as well as seeing your questions online. To date, we haven't discovered any "bad disks." People seem to be having problems due to unfamiliarity with SynCalc. The most common error is neglecting to clear the memory buffer before trying to load the 1040 template. You must use the /E command or you'll get an out of memory error. The 1984 update is in the April ANTIC, on sale March 1. A bug was discovered in cell E193 of the April listing. This bug won't affect you unless you are using Income Averaging -- and it IS CORRECTED in the magazine. It's only the April disk and the first pressing of the \$15 extra-form template disk that are wrong. To correct E193, replace the letter "E" for each of the two letters "D" you'll find in that cell. You'll need to use the /FUD unprotect command before you can type the change. It's best to phone SynCalc Customer Service at (415) 527-7751 if you're having problems. Synapse Software is well-equipped to answer SynCalc operation questions. DEEP BLUE C PROBLEM. This is brand-new! If you're one of the several hundred people who ordered either the DEEP BLUE C COMPILER or CUSTOM BLEND from the ANTIC ARCADE Catalog...a disk pressing problem has been discovered. A new run has been pressed and replacement disks will be going out to purchasers this month. We apologize for any inconvenience. But Antic entered the mail-order business only a few weeks ago -- and overnight we have become one of the largest suppliers of quality Atari software. Under the circumstances, we believe we've had very few glitches. Orders are being processed and shipped every day also. You should get the disks you ordered within four weeks. KUDOS TO SG-10 So you want to know about the new \$299 Star SG-10 dot-matrix printer, 74226, 2401?? ANTIC got one last month and we used it to print the listings for the May issue. Its 60 cps Near Letter Quality mode prints sharper than the Gemini 10X model it replaces. So far we like the SG-10 a lot. A review will come in the June issue. THE BUG BBS LIST One of the best-liked things ANTIC has done recently was to download and print in our February issue the entire Atari BBS list that's kept by the Boise Users Group (BUG). Art Bross, the BUG sysop (70655,424) dropped us a line to let us know that since ANTIC published the list it

has doubled to about 400 numbers. Several listed boards have become so busy that the sysops "can't even get on their own boards" anymore, Art reports. The one wrong number we've heard about from the February BUG list so far, is the sole BBS given for the state of Mississippi. Do NOT dial the number printed for FREM COASTAL list,

don't call ANTIC. Phone BUG at (208) 383-9547. ANTIC expects to print a BUG list again some time in the future. MIDI IN JUNE The MIDI article requested by 75006,3606 will be forthcoming in the June issue of ANTIC. There are some mind-boggling new products for the Atari involving the Musical Instrument Digital Interface or sound in general. Just yesterday we got our \$499 Casio CZ-101 synthesizer to help us check everything out.

HANDS-ON WITH ANTIC'S DEVELOPMENT 520ST.

by JACK POWELL
ANTIC TECHNICAL EDITOR

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Our Atari 520ST just arrived in the Antic offices. This is the \$5,500 development package, and it includes the computer, two 3 1/2" disk drives, one medium resolution (640 X 200) RGB analog monitor, and one mouse.

The software in the package is the "C" compiler, machine language assembler and debugger by Digital Research, the Mince screen editor by Mark of the Unicorn, Kermit -- a modem protocol program for file transfer, CP/M-68, and, of course, GEM -- which is in ROM in the machine.

On back order -- but expected soon -- is a high resolution (640 X 400) monochrome monitor and a ten megabyte hard disk.

Along with all this came 1000 pages of documentation and since it will take some time to digest all of this, we thought you might like a first impression of this new, high level Atari computer.

The development 520ST is a preliminary model and there will be some changes between now and the time you see it in the stores, but all parts of this machine were factory made in the same manufacturing plants as the final product will be. The only real difference -- besides the price -- is that these machines were hand assembled.

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The first thing you notice when taking the ST out of its box, is that it's very light. Although somewhat larger in size than the 800XL, it feels lighter. This may be because the shielding has not yet been added.

It looks exactly like the ST on our May cover, but there are some details you can't see from the photograph. On the right edge of the machine, to the rear, are two joystick ports identical in appearance to current Atari joystick ports, except they are also used for the mouse.

On the left edge, rear -- opposite the joystick ports, is the cartridge slot. This will accept a 40-pin board -- 20 upper and 20 lower.

In back of the computer are various switches and ports, each labelled beneath and with an indicating icon etched in the plastic above. From left to right they are:

Reset - a small, square button.

Power - identical to previous Atari power switches.

Power In - 7-pin, male DIN.

MIDI Out - 5-pin, female DIN.

MIDI In - same as above.

Television - RCA, female.

Channel - mini-switch, labelled "L" "H".

Monitor - 13-pin, female DIN.

Printer - female D-25, IBM-PC/Centronics compatible.

Modem - male D-25, IBM compatible.

Floppy Disk - 14-pin, female DIN.

Hard Disk - female D-19.

Besides the standard keyboard and ten-key pad, are ten function keys, labelled F1 to F10. The isolated cursor section is particularly well designed with the lower three keys representing Left, Down and Right, and the Up arrow centered above them. On either side of the Up key are Insert and Ctr/Home. The top two keys in the cluster -- which are enlarged -- are Help and Undo. The Undo key may become particularly useful.

The drives accept Sony 3 1/2" disks. To boot the machine, first turn on the drives and insert both disks before turning on the computer. A disk must be in a drive for the computer to later access that drive.

When booted, the GEM desktop appears as a light green background with pale blue border and black-outlined icons. In the upper right corner of the screen are two disk icons, one over the other, that look like file cabinet drawers. In the lower right corner of the screen is a trash can.

In the border area, above the upper left section of the green background, are the words, "DESK FILE VIEW OPTIONS." In the middle of the screen is a thin, black arrow-cursor which is moved by the mouse.

We'll save details on GEM for later articles. Suffice it to say, it is fast! It can redraw an entire screen of icons in the blink of an eye.

DOS 2.5 TO THE RESCUE

by ERIC CLAUSEN

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This long awaited product, successor to Atari 2.0, will become the new 'official' Atari DOS. It was written by the same group of people who are responsible for Atari BASIC, DOS 2.0, BASIC A+, BASIC XL, DOS XL, ACTION! and other top-ranked Atari products.

DOS 2.5 supports both single density and the enhanced (dual) density mode on the Atari 1050 disk drive. If you format a disk in your 1050 drive with this DOS, you'll find that you now have 1010 sectors (129K) of available disk storage. This represents a 43% increase in capacity over DOS 2.0. DOS 2.5 maintains the use of 128 byte sectors but increases the number of sectors per track from 18 to 26.

Most importantly, DOS 2.5 maintains file compatibility with DOS 2.0. Thus if you have a 1050 drive, you can boot up DOS 2.5, format a disk, directly copy your DOS 2.0 files onto the disk and have considerably more room left over. All this with no hardware modifications to the disk drive.

Otherwise, this new DOS looks and acts exactly like DOS 2.0. The menu will be reassuringly familiar as there has been only one addition: Option [P] on the DOS 2.5 menu will allow 1050 disk drive users to force a single density disk format instead of the default enhanced density.

Those of you with 810 drives need not despair, this DOS is for you too. Although you will not be able to use the enhanced density feature, you can boot DOS 2.5 disks that were formatted and written in single density on 1050 drives. The way that DOS 2.5 handles this is to "hide" files from the 810 drive that cross over sector 720, which

CHAOS

is normally the last DOS 2.0 sector. If you completely fill a DOS 2.5 disk (1010 sectors) on a 1050 and then check the disk directory at some point you will see files listed like this:

```
FILE1.BAS 025  
<FILE2.BAS> 025
```

This tells you FILE1.BAS is entirely contained within the first 720 disk sectors and can therefore be accessed by an 810 drive. The file(s) with the "< >" characters around them are NOT accessible with an 810 drive because they are physically located where the 810 drive can't read them. So if you have an 810 and ask your friend with a 1050 to copy some of his files, make sure the files you want don't have < > around them!

Other features of DOS 2.5 are:

1) Though the directory of an empty formatted disk will read "999+ FREE SECTORS". You really have 1010 sectors.

2) Option J (Duplicate Disk) now formats the destination disk before copying.

3) DOS 2.5 will allow 64K of memory in the new 128K Atari 130XE computer to be used as a ramdisk.

4) A file conversion utility to convert Atari DOS 3.0 files to the DOS 2.5 format.

5) A utility to create autoboot basic programs.

6) An un-erase capability to retrieve accidentally erased files.

7) You can easily turn write verify on or off and change the number of disk buffers, without resorting to POKES.

8) The ability to test for bad sectors -- whole disk only.

Options 3 through 8 are not directly accessed through the menu but are included on the DOS 2.5 disk as binary load files.

One thing that concerns me, as a user, is the lack of a disk utility program for enhanced density disks. In some preliminary checks, I've found that DiskWiz 2 will read all enhanced density sectors out to sector 1023 (the difference between 1023 and 1010 is taken up by the boot and directory sectors where program data is not stored). It won't trace or map sectors that run past sector 720, however.

PAPERCLIP PREVIEW

by MICHAEL CIRAULO
and NAT FRIEDLAND.

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Simply, PaperClip is by far the best word processor ever available for the Atari. It boasts a line-up of advanced features that would be hard to match on even the biggest-name word processing software costing \$300 or more.

PaperClip makes your Atari the word processing equal of just about any computer on the market. Yet it is not hard to learn and sells for only \$59.95.

Some nuts and bolts information: PaperClip runs on all Atari computers with 48K. It comes on a disk that you can back up. But the program is protected by a special key that plugs into joystick port 2.

A few technical notes: As we've previously reported, it is based on the ACTION! editor and written in 100% machine language, so it's fast. (It's really quite different from the PaperClip version written for the Commodore 64.) The preliminary draft of the manual that we've got is pretty clearly written. And the screen gives you big, sharp letters with true descenders, because the program uses ANTIC Mode 3 and redefined characters.

UNIQUE FEATURES

To justify our enthusiasm for PaperClip, here are some of its most distinctive features:

* DUAL WINDOWS - You can display two text files onscreen at the same time. And you can easily move blocks of text between file windows.

* ONE-KEY MACROS - You can easily set up for one keytouch while pressing [START] to type in an entire word, phrase or paragraph that you regularly use in your writing.

* PREVIEW MODE - PaperClip is easier to use in 40-column screen format than any word processor we've ever seen. In the preview mode you can scroll horizontally or vertically to see exactly how your words will fit on the page. Even in the normal mode, a ~~dream~~ mark at the end of each line shows exactly where the "hard spaces" stop.

CHAOS

‡ HIGH-POWER COMMANDS - There's practically no flipping between mode menus. Saving and loading files, disk formatting, editing, text entry, disk directories and help menus are all available from the same screen with the touch of very few keys. Some really unique and useful commands include automatic save, transposing letters or words, or converting capital letters and lower-case letters back and forth.

Of course, in PaperClip you will also find all the standard features you'd expect from a competitive word processor today. There's global search and replace, underlining, italics, boldface, headers and footers, onscreen help files, pitch control, page length setting, nearly 30 different printer drivers plus a configuration menu, and on and on...

Yet for all the power it offers, PaperClip is surprisingly easy to learn. This is unusual, because the more powerful editors are usually harder to master. But PaperClip is virtually as easy to use as Bank Street Writer so there is no reason why it shouldn't be your first word processor.

PaperClip even has a lot of other powerful features we simply haven't had a chance to work with yet. Plus there's one or two we've been told about that are still in development.

ATARI REPAIRS

This corporation has undergone tremendous changes since its takeover last July by Jack Tramiel. The problems that plagued Atari before and during the ownership transition—including poor computer repair service—are rapidly diminishing. Most notably, Atari is beefing up support and information for its 1500 service centers. If your malfunctioning computer and peripherals are under the 90-day warranty, you can exchange them at the place of purchase. After that, most repairs will be handled at local Atari service centers/ You can find the one nearest you by calling the customer service number: (408) 745-4851. Repairs that can't be handled by the local center can go to Atari's main factory in California: 390 Caribbean Drive, Sunnyvale, CA 94089. This article was taken from the February 1985 issue of FAMILY COMPUTING.

GOTTA MENU PROGRAM!!

```

100 REM SORTING MENU PROGRAM
110 REM BY TERRY KERR
120 DIM
S$(800),FN$(12),IN$(20),F$(15),ABC$(15),R$(6):GRAPHICS
0:SETCOLOR 2,6,3:SETCOLOR 4,9,4
140 R$="D1:$.?":? :? :GOTO 180:REM DELETE THIS LINE IF YOU
HAVE MORE THAN ONE DISK DRIVE
160 ? :? "WHICH DRIVE?":INPUT R
170 IF R=1 THEN R$="D1:$.?"
175 IF R=2 THEN R$="D2:$.?"
180 OPEN #1,6,0,R$
200 GRAPHICS 0:SETCOLOR 2,6,3:SETCOLOR 4,9,4:POKE 752,1
210 POSITION 10,2: "Reading File Names"
240 INPUT
#1,IN$:FN$=IN$(3,10):FN$(9)="." :FN$(10)=IN$(11,13)
260 IF IN$(6,9)="FREE" THEN GOSUB 1000:GOTO 320
280 IF IN$(11,13)="SYS" THEN 240
300 S$(LEN(S$)+1)=FN$:N=N+1
310 GOTO 240
320 ? "":FOR L=1 TO N
340 IF L>21 AND L<44 THEN POSITION 14,L-22
342 IF L>42 THEN POSITION 27,L-43
344 IF L<22 THEN POSITION 1,L-1
350 FF=((L-1)*12)+1: S$(FF,FF+11)
360 NEXT L
380 POSITION 14,21: IN$(2)
390 ABC$="D1: "
400 POSITION 1,23: "TYPE PROG TO RUN D":INPUT
ABC$(4,15)
420 RUN ABC$
1000 POSITION 10,8: "sorting file names":REM SORT
SUBROUTINE
1010 DIM HOLD$(13)
1020 LREC=12:KB=1:KF=2:REM KF IS SORT DEPTH FACTOR
1050 TAIL=(N-1)*LREC+1
1060 LAST=0
1070 FOR J=0 TO N-2
1080 INDEX=LAST:LAST=0
1090 IF INDEX>N-J-2 THEN 1140
1100 FOR I=INDEX+1 TO N-J-1
1110 IF
S$(I*LREC+KB,I*LREC+KF)<S$(INDEX*LREC+KB,INDEX*LREC+KF)
THEN LAST=INDEX:INDEX=I
1120 NEXT I
1130 IF INDEX=N-1 THEN 1170
1140 HOLD$=S$(INDEX*LREC+1)
1150 S$(INDEX*LREC+1)=S$((INDEX+1)*LREC+1)
1160 S$(TAIL)=HOLD$
1180 NEXT J
1190 HOLD$=S$
1200 S$(1)=S$(LREC+1)
1210 S$(TAIL)=HOLD$
1230 RETURN

```


CCUG

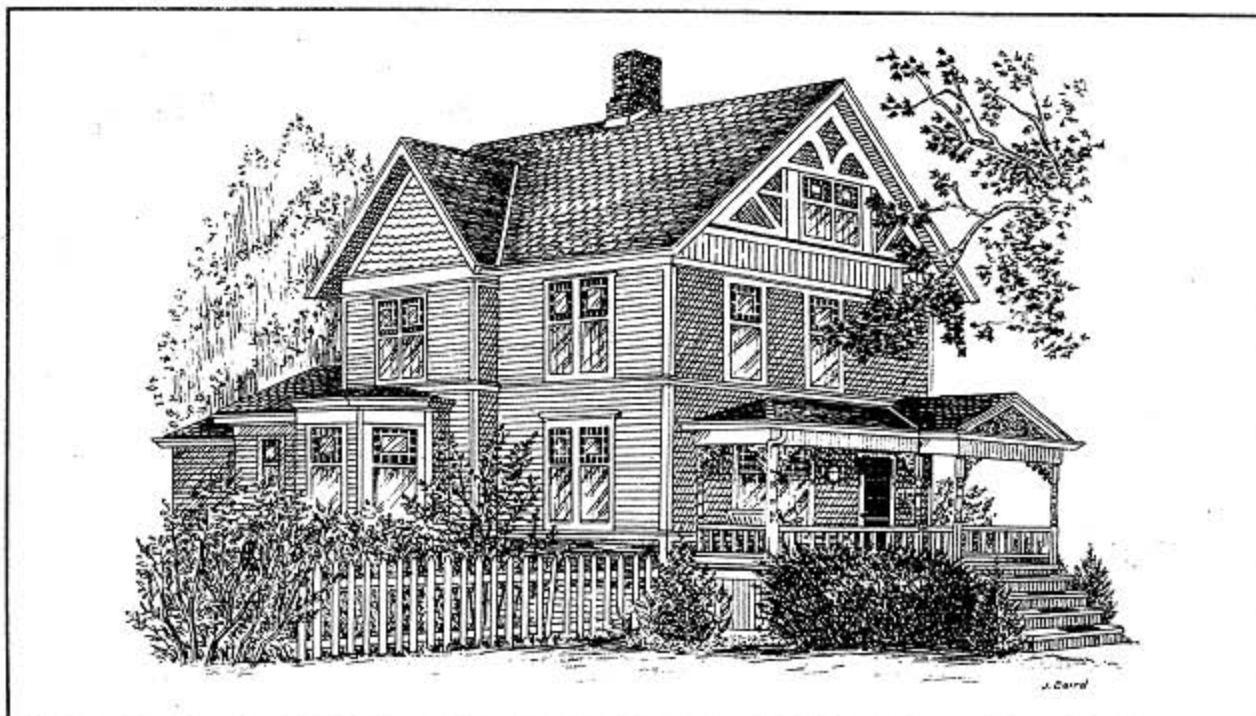
CoCo NOTES

By Terry Feichtenbiner
CCUG President

Well, here it is, the June issue of ENERGY already! I hope all of the Greater Lansing Color Computer Users Group members are enjoying a great Summer. Don't forget your users group when you're having fun in the sun. Users groups usually see declining participation in the Summer months, and that hurts the group all year 'round because of the time it takes to get up to speed in the Fall. I guess my message is to have a great Summer and keep on supporting your Users Group. Remember, our meeting place is air conditioned and we'll keep trying to present interesting programs.



Malcolm Cleveland submits his impression of the latest gadget from CCUG member Bud Park.



HOUSE

```

CCC   000   M   M   PPPP   U   U   TTTT   EEEEE   RRRR
C   C   O   O   MM  MM   P   P   U   U   T   E   R   R
C       O   O   M   M   P   P   U   U   T   E   R   R
C       O   O   M   M   PPPP   U   U   T   EEE   RRRR
C       O   O   M   M   P       U   U   T   E   R   R
C   C   O   O   M   M   P       U   U   T   E   R   R
CCC   000   M   M   P       UUU   T   EEEE   R   R

```

```

PPPP       A   PPPP   EEEEE   RRRR
P   P   A   A   P   P   E       R   R
P   P   A   A   P   P   E       R   R
PPPP   AAAAA   PPPP   EEE   RRRR
P       A   A   P       E       R   R
P       A   A   P       E       R   R
P       A   A   P       E       R   R

```

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by

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